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# Media exposure and males' evaluation of the appearance of females

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Media Exposure and Males' Evaluation of the Appearance of Females

by

Yuko Yamamiya

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
Department of Psychology  
College of Arts and Sciences  
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### Dedication

I would like to dedicate this dissertation to my mom, Kiyomi Yamamiya, who has been with me all through my years in the U.S. Without her support, help, encouragement, and sacrifice, I could have never come this far.

### Acknowledgements

I appreciate my major professor and mentor, Dr. Thompson, for his support, guidance, and help in so many ways. I would also like to thank my committee members, Dr. Sacco, Dr. Brannick, Dr. Rottenberg, and Dr. Vandello, for their insightful suggestions and advice to improve this project. And last, I thank my undergraduate research assistants for their help to complete this study.

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## Media Exposure and Males' Evaluation of the Appearance of Females

Yuko Yamamiya

### ABSTRACT

The adverse effect of the exposure to images of attractive females on women's body image and mood has been well-documented in studies conducted in various western and westernized nations. However, research designed to determine the effect of exposure to attractive female images on men has been rather neglected. Past findings indicate that after being exposed to exceptionally attractive female images, males report less satisfaction for a current relationship, rate average-looking females as less attractive, and express less affection for their significant other compared to those men exposed to control images. It is currently not known, however, whether a psychoeducational intervention might prevent the negative media exposure effect. Additionally, it is not known if the exposure effect might be moderated by dispositional characteristics of the participant. This study was designed to determine if a psychoeducational manipulation consisting of information regarding the unrealistic appearance standards currently required of women would mitigate the ratings men give of average-looking women following exposure to attractive images. Additionally, two dispositional measures were included (appearance-schematicity and female-ideal internalization) in order to evaluate whether these trait levels would moderate the effects of the exposure manipulation.

The participants were 159 male undergraduate students between 18 and 30 years of age. The majority (57%) of them were Caucasian, followed by 19% who were

Hispanic/Latino and 11% who were African-American. Their mean age was 19.80 ( $SD = 2.06$ ) and mean BMI was 24.90 ( $SD = 4.20$ ). Most of them (42%) were not seeing anyone currently, whereas 39% of them were in a committed relationship.

The findings partially supported the hypotheses. The males who were exposed to the attractive female images evaluated average females less physically attractive than those exposed to a control condition (inanimate objects); however, the psychoeducation did not reduce the adverse exposure effect. Instead, the combination of neutral audio-information and control exposure condition resulted in the most favorable ratings of average females. Regarding dispositional characteristics, female-ideal internalization was associated with the loss of interest in dating average females and the overestimation of a current partner's weight after the experiment. The limitations and implications of the study findings are discussed.

## Introduction

### *Background*

Traditionally, in the evaluation of physical attractiveness, researchers have treated the construct as an independent variable (Berscheid & Walster, 1974; Gross & Crofton, 1977). However, the evaluation of someone's physical attractiveness has been found to be dependent on several factors, including knowledge of the person's similarity in attitudes with the self (Berscheid & Walster, 1974), information that the person has highly valued traits (Gross & Crofton, 1977), actual relationship of the person to the individual (Cavior, 1970), and/or association of the person with someone else who is very attractive (Meiners & Sheposh, 1977). Moreover, a "contrast effect" may affect perceptual judgments. That is, perceptual judgments and evaluations of "average" stimuli in a series are displaced away from extreme stimuli, and this effect operates in various physical dimensions such as weight (e.g., Heintz, 1950; Sherif, Taub, & Hovland, 1958), length (e.g., Krantz & Campbell, 1961), and shape (Helson & Kozaki, 1968). Therefore, it is possible that a contrast effect also operates in the judgment of physical attractiveness, and prior exposure to extremely attractive people may result in an underrated judgment of the attractiveness of an average individual.

We are flooded with the images of exceptionally attractive individuals via mass media, and the media exposure may set an (unrealistically) high standard of attractiveness as an anchoring point of judgment (Helson, 1964). Indeed, from rather early years, various researchers have argued that mass media portray extraordinary high "standards"

of physical attractiveness (Berscheid & Walster, 1974), implying that only highly attractive people are “appropriate,” “ideal,” or “desirable.” Such ideal female images in various male-oriented magazines, TV programs and commercials, and other Western media are so pervasive that the exposure to the idealized images is almost inevitable (Hargreaves & Tiggemann, 2003). According to cultivation theory (Gerbner, Gross, Morgan, & Signorielli, 1994), such recurrent and continuous exposure to a specific type of people, values, and themes can strongly affect media consumers’ conceptions of the reality. That is, the repeated portrayal of extremely thin and attractive females may result in the consumers’ having unrealistically high expectations for females.

Thus, average stimuli may be placed farther away from the extreme stimuli, and the extreme stimuli are set as the “ideals” or reference points through the recurrent presentation, which in combination result in the underevaluation of the average stimuli. This may mean that average females who are not close to the ideals of attractiveness set by the media presentation of extremely thin and attractive females will be unjustly underrated by the media consumers, especially males. Some researchers have indeed found this adverse media exposure effect on the evaluation of female attractiveness among males. For instance, in a field study by Kenrick and Gutierrez (1980), two male confederates visited college dorm rooms and asked male residents to rate a picture of an average-looking female as a potential blind date for another resident, either before or during a TV program consisting of “Charlie’s Angels” (whose main characters were three strikingly attractive females). It was found that the picture of an average-looking female was rated significantly lower among those who were asked to rate the picture while watching “Charlie’s Angels” than among those who were watching something else or

nothing at all.

In another study by the same researchers (Kenrick & Gutierrez, 1980), male participants were shown either slides of attractive females or no pictures at all, then asked to rate a picture of an average-looking female on various traits including attractiveness and desirability. Again, the picture of an average female was rated significantly lower among the group of males being exposed to attractive female images than males being exposed to no pictures. Moreover, Harrison and Cantor (1997) have found that the males who habitually read magazines, especially males' entertainment magazines, were more disappointed when their blind date was overweight, compared to those who did not routinely read such magazines. These findings imply that the recent or current exposure to highly attractive media images in magazines, movies, or on TV may negatively affect one's initial evaluations of a potential romantic partner as well as expectations for females in general.

As all the participants in the above mentioned studies were rating a stranger, these particular results seem most applicable to a situation where one loses interest in someone as a potential romantic partner (Walster, Aronson, Abrahams, & Rottmann, 1966) just because the person does not meet the "expectations" of female attractiveness. In one study, however, whether these results would also be applicable to judgments made within on-going relationships was tested (Kenrick, Gutierrez, & Goldberg, 1989). The study found that those who were exposed to the attractive centerfolds of the opposite sex rated their current partners' sexual attractiveness significantly lower than did those who were not. Moreover, male participants expressed less affection toward their current partners after the exposure to the centerfolds. Thus, the exposure to attractive media

images seems to have adverse effects on the evaluation of attractiveness and desirability of a “normal” looking individual, especially female, regardless of one’s relationship to the person (i.e., a stranger or current romantic partner).

Nevertheless, despite the findings that the media exposure has adverse effects on the evaluation of others in terms of physical appearance and desirability, this research area has received little attention. Instead, researchers have rather disproportionately focused on the adverse effects of media exposure on females’ body image disturbances and eating disorder symptomatology. For instance, Stice, Schupak-Neuberg, Shaw, and Stein (1994) found that the amount of the exposure to magazines and/or TV was positively correlated to body-image dissatisfaction, gender role endorsement, and eating disorder symptomatology among females. Even a brief exposure to highly attractive media images is found to result in elevated weight concern, body-image disturbances, self-body consciousness, negative affects, and decreased self-perception of attractiveness among females (Tiggemann, 2002).

However, not all females are adversely affected by the media exposure to the same degree; some females are, in fact, not affected at all. Recent research has shown that particular dispositional factors either mediate or moderate the media exposure effects among females. One of the dispositional factors is the level of internalization of sociocultural messages regarding thinness and attractiveness (Cattarin, Thompson, Thomas, & Williams, 2000; Stormer & Thompson, 1996; Yamamiya, Cash, Melnyk, Posava, & Posavac, 2005). Cattarin et al. (2000) argue that the media-transmitted images of highly attractive females is one of the pathogens that facilitate body-image dissatisfaction, and those who are most susceptible to such pathogens are those who have

internalized sociocultural ideals of attractiveness strongly held in the society.

Another dispositional factor that is found to influence the media exposure effect on the judgment of self-perceived attractiveness among females is appearance schematicity. Based on the self-schema theory by Markus (1977), it has been suggested that individuals who invest heavily in appearance (i.e., highly appearance-schematic individuals) use appearance-related information as the basis of their self-evaluation (Cash & Labarge, 1996). Moreover, they are more likely to pay attention to, remember, and interpret appearance-related information than are those with low appearance schematicity (Altabe & Thompson, 1996; Cash & Labarge, 1996; Vitousek & Hollon, 1990). Such an information processing bias not only influences one's interpretation of self-relevant information but also causes the increased attention to the appearance of other people (Markus & Smith, 1981; Markus, Smith, & Moreland, 1985).

Internalization of sociocultural ideals and appearance schematicity as potential mediators or moderators of the adverse effects of media exposure have not yet been examined in males. It is possible that males with high internalization of the sociocultural ideals required of females in our society may be more likely to evaluate the physical appearance of the "real world" females less favorably. In addition, males with high levels of appearance schematicity might be expected to pay more attention to and use appearance as the basis of the evaluation of not only themselves but also other people. Thus, it might be conjectured that males with high levels of internalization and appearance schematicity should rate both a picture of an average-looking female as well as their current romantic partner as less attractive and less desirable after viewing highly attractive media images of females.

The fact that those with particular attitudinal and cognitive patterns, such as the internalization of sociocultural ideal and the mental investment in appearance (i.e., appearance schematicity), are more prone to the media-exposure effects implies that it is possible to prevent the adverse media effects by altering their cognition. In fact, many researchers have placed more emphasis on how schematic investment in physical attractiveness cognitively moderates the negative consequences of the media exposure, such as body-image dissatisfaction, and started to take a cognitive approach to prevent the negative media influence (e.g., Altabe & Thompson, 1996; Cash, 1994; Labarge, Cash, & Brown, 1998; Markus, Hamill, & Sentis, 1987). For instance, researchers have evaluated media literacy as a prevention strategy to reduce the negative media effects on one's body image (Berel & Irving, 1998; Levine, Piran, & Stoddard, 1999 cited in Groesz, Levine, & Murnen, 2002). Media literacy includes such tactics as awareness of media strategies, analysis of contents and intentions of the media messages, and activism against what the media advocate (Levine et al., 1999; Piran, Levine, Irving, & EDAP, Inc., 2000). Providing psychoeducational information regarding the facts about the unrealistic "standards" or "ideals" advocated via the media in intervention programs (Thompson & Smolak, 2001; Levine & Smolak, 2002) is an example of a practical application of media literacy.

The utilization of media literacy has been found effective to prevent the adverse media effects among young *females* in several studies. For instance, Posavac, Posavac, and Weigel (2001) provided two types of psychoeducational information to female college students. One type of the psychoeducational information was labeled "artificial beauty," which argued that the media images of women were not appropriate "standards"

because their beauty was artificial as their physical attributes were altered by various professional techniques. For instance, make-up and hair styling, lighting, and several photographic effects including airbrushing and computer graphics create their flawless looks and women are made to believe that they can attain the flawless looks if they put a lot of money and effort into dieting, priming, and/or exercising. Another type of psychoeducational message is “genetic realities,” which contains information noting that most women are genetically predisposed to be heavier than the media-transmitted images of “ideal” women are, though most women might believe that through certain behaviors, they could be as thin as fashion models. Posavac et al. (2001) found that the exposure to idealized media images increased body-image dissatisfaction among females who had pre-existing weight concern, but the provision of the psychoeducational information significantly reduced the adverse media-exposure effects among those females. Yamamiya et al. (2005) conducted a similar study, utilizing the psychoeducational information used in the Posavac et al. (2001) study with college females, though they used internalization levels as a moderator and state body image instead of weight concern as a dependent variable in their analysis. They found a comparable result with that of the Posavac et al. (2001) study. That is, the exposure to thin-and-beautiful media images worsened the state body image of young females particularly with high internalization levels, but providing the psychoeducational information reduced the negative impact of the media exposure on them.

#### *Overview of Current Study*

The proposed study is modeled after the Yamamiya et al. (2005) study in several respects and will involve the evaluation of a psychoeducational strategy designed to

reduce the effects of media exposure on males' judgments of females. There will be four exposure conditions. In one control condition, participants will be provided neutral information ("marketing strategies") and control stimuli (slides of various products). In a second control condition, participants will be provided the neutral information ("marketing strategies") but will view slides of attractive female models, instead of products. In the third control condition, participants will be provided the psychoeducational information ("artificial beauty") designed to reduce an endorsement of the sociocultural ideal, then exposed to the neutral stimuli (slides of products). In the experimental condition, participants will be provided psychoeducational information, followed by a viewing of the slides of attractive females. In all four conditions, following exposure to the attractive models or products, participants will rate the appearance and desirability of slides of females pre-rated to meet a criterion of average level of attractiveness. They will also rate the appearance and desirability of their current romantic partner (if they are in a relationship). Levels of internalization and appearance investment will be analyzed as moderators.

It is expected that the experimental group receiving the psychoeducational information prior to the exposure to slides of attractive females will produce ratings on the dependent variables (slides of average females, partner's attractiveness) that are higher (e.g., will rate them as more attractive) than those ratings for the group receiving either the neutral message prior to viewing the attractive females or the group receiving the neutral message prior to the product slide manipulation. It is also expected that the group viewing the slides of attractive females following the neutral message will make the lowest ratings on the dependent measures. Therefore, the order of ratings is

hypothesized to be the following: Psychoeducational Group (PG) > Control Group 1 (CG1), neutral message, product slides = Control Group 3 (CG3), psychoeducational message, product slides > Control Group 2 (CG2), neutral message, attractive female slides. It is also hypothesized that internalization and appearance schematicity levels will significantly affect ratings on the dependent measures, with those participants higher on these levels rating the average models as less desirable.

### *Pilot Studies*

Two pilot studies were conducted to provide measures and stimuli for the current project.

#### *Pilot Study 1*

Due to the lack of a scale to assess males' internalization of females' attractiveness standards, the Sociocultural Attitudes Towards Appearance Scale – 3: Internalization subscale (SATAQ-3: Internalization; Thompson, van den Berg, Roehrig, Guarda, & Heingerg, 2004) was modified to measure the extent to which males internalize the sociocultural ideal, compare *females* to the ideal, and wish *females* to look like the ideal. Half of the items ask respondents to rate items with regard to females in general and the other items ask them to rate with regard to their romantic partner (current or hypothetical). The newly modified scale, named the *Male Internalization of the Female Ideal Questionnaire* (MIFIQ) was given to 225 male students at the University of South Florida in exchange for an extra credit point, which could be used toward various psychology courses. It was filled out either in classrooms or on-line via ExperimenTrak™ from 2003 to 2004. Among the respondents, 58% were in a romantic relationship, 56% were not currently married, and 36% were committed to one particular

partner (including marriage). Approximately half (55%) fell in the age range of 18 to 20, and 41% were Caucasian, 6% African American, 7% Hispanic, and 4% Asian. In order to analyze factor structure, the data were entered in SPSS ver.11.0 and exploratory factor analysis was run with principal axis factoring extraction method. The results showed that the scale had only one factor (see Table 1).

Table 1

*Means, Standard Deviations, and Factor Loadings of the Male Internalization of the**Female Ideal Questionnaire*

<u>Items</u>	<u>M (SD)</u>	<u>Loadings</u>
I wish more women looked as athletic as the women in magazines.	3.31 (1.01)	.52
I wish more women looked as athletic as sports stars.	2.83 (1.01)	.42
I compare most women's bodies to those of women in "good shape."	3.60 (1.08)	.55
I compare most women's bodies to those of women who are athletic.	3.14 (1.03)	.52
I would like more women's bodies to look like the women on TV.	3.43 (1.02)	.68
I would like more women's bodies to look like the models in magazines.	3.30 (1.22)	.66
I would like more women's bodies to look like the women in movies.	3.54 (.98)	.65
More women should try to look like the women on TV.	2.94 (1.04)	.72
I compare most women's bodies to the bodies of TV and movie stars.	2.97 (1.09)	.71
I compare most women's appearances to the appearances of TV and movie stars.	2.99 (1.08)	.75
I do not compare most women's bodies to the bodies of women in magazines.	3.05 (1.11)	.64
I compare most women's appearances to the appearances of women in magazines.	2.96 (1.08)	.73
I wish my partner/significant other looked as athletic as the women in magazines.	2.94 (1.16)	.69
I wish my partner/significant other looked as athletic as sports stars.	2.68 (1.14)	.61
I compare my partner's/significant other's body to those of women in "good shape."	3.43 (1.06)	.57
I compare my partner's/significant other's body to those of women who are athletic.	3.03 (1.14)	.56
I would like my partner's/significant other's body to look like the women on TV.	3.08 (1.14)	.74
I would like my partner's/significant other's body to look like the models in magazines.	3.08 (1.22)	.73
I would like my partner's/significant other's body to look like the women in movies.	3.18 (1.11)	.73
My partner/significant other should try to look like the women on TV.	2.57 (1.07)	.76
I compare my partner's/significant other's body to the bodies of TV and movie stars.	2.84 (1.07)	.78
I compare my partner's/significant other's appearance to the appearances of TV and movie stars.	2.83 (1.08)	.80
I do not compare my partner's/significant other's body to the bodies of women in magazines.	2.84 (1.14)	.66
I compare my partner's/significant other's appearance to the appearances of women in magazines.	2.82 (1.14)	.76

That is, males seemed to internalize the female ideal and evaluate all females in the same fashion regardless of (1) sources of the ideal (i.e., fashion models, movie stars, female athletes) or (2) their relationship to the females being compared and evaluated (i.e., female strangers, their romantic partner). The scale consists of 24 items that assess to what extent males internalize the sociocultural ideals, compare females to such ideals, and wish females including their own partner to look like such ideals. The internal reliability of the MIFIQ with this pilot population was .95.

### *Pilot Study 2*

In order to create the visual stimuli that would be used in the study, numerous pictures of females were collected from a variety of websites, such as portfolios of model agencies and picture banks for the public use. Altogether, 108 pictures of varied levels of attractiveness were selected and provided to 58 male participants (mean age = 22.3,  $SD = 5.39$ ; 57% Caucasian, 16% African American, 9% Hispanic, and 7% Asian). They were asked to rate and estimate each female by using three 7-point Likert-type scales and one 4-point Likert-type scale in terms of the attractiveness (response range of 1 = *Very Attractive* to 7 = *Very Unattractive*), weight (response range of 1 = *Very Underweight* to 7 = *Very Overweight*), mood (response range of 1 = *Very Positive Mood* to 7 = *Very Negative Mood*), and the age (1 = *Under 18 years old*, 2 = *18 to 25 years old*, 3 = *26 to 35 years old*, 4 = *Over 36 years old*). The mean score of attractiveness was 3.61 ( $SD = 1.31$ ).

The criterion for “Attractive” images was photos that were at least 1 SD below the mean of the scores. This score was 2.6 (lower score indicates higher attractiveness). “Average” images were, on the other hand, selected among the group of pictures whose

mean scores fell between 4.00 and 4.99 as 4 was assigned “Average” on the scale, since the arithmetic mean might be pulled up or down by outliers. From the final group of 30 “Attractive” images and 24 “Average” images, 10 pictures were chosen from “Attractive” group (as exposure stimuli; see Procedure section for details) and 12 from “Average” group (as rating stimuli). “Attractive” group consists of three pictures of Caucasian, three pictures of Hispanic, two picture of Asian, and two pictures of African American females. These numbers were determined by assuming that the sample for the present study will be similar in demographic characteristics to the pilot sample, and approximately 33% of the selected pictures in the initial “Attractive” set were Caucasian, 30% Hispanic, 20% Asian, and 17% African American. On the other hand, “Average” group consists of five pictures of Caucasian, three pictures of Hispanic, two pictures of Asian, and two pictures of African-American females. A preliminary analysis was run to equate the estimated age and weight of the females in the selected slides, regardless of their attractiveness levels. As a result, one picture of a Hispanic-Caucasian female with the mean attractiveness score of 3.94 was included in “Average” set; all other Hispanic pictures rated between 4.00 and 4.99 were overweight, which would lead to a larger mean score of the estimated weight among average slides.

## Methods

### *Participants*

Participants were undergraduate male students at the University of South Florida in Tampa, Florida. They participated in the study in exchange for extra credit points, which could be used in various psychology courses. In order to participate in the proposed study, they must be: (1) between 18 and 30 years old; (2) heterosexual; and (3) male.

Altogether, 182 male students participated. However, 23 of them were deleted from the analyses because they missed three or more items on the attention check questions on the Message Rating Form (see below), skipped crucial items or large numbers of items on any of the questionnaires used, answered differently on the same questions, and/or failed to complete their participation.

Of the 159 participants whose data were included in the final analyses, 57% (n = 90) were Caucasian, 19% (n = 30) were Hispanic/Latino, 11% (n = 18) were African-American, 8% (n = 13) were Asian, and 5% (n = 8) were other. The average age of the participants was 19.80 ( $SD = 2.06$ ) and their class standing were 40% (n = 63) freshmen, 30% (n = 48) sophomores, 16% (n = 25) juniors, and 15% (n = 23) seniors. In regard to their relationship status, 42% (n = 66) were not seeing anyone, 19% (n = 30) were dating casually, 35% (n = 56) were dating someone exclusively, 1% (n = 2) were engaged, and 3% (n = 4) were married. Their average BMI was 24.90 ( $SD = 4.20$ ).

### *Design and Procedures*

Participants signed up for the study via ExperimenTrak™ on-line participation registration. In order to sign up for the study, however, participants were required to complete the MIFIQ and the Appearance Schemas Inventory-Revised (Appendix A and B, respectively). Then the participants signed up for any available group session (five participants maximum). Each group was randomly predetermined to be control group 1 (Neutral Info.- Products), control group 2 (Neutral Info.- Attractive Models), control group 3 (Psychoeducational Info.- Products), or experimental group (Psychoeducational Info.- Attractive Models).

As participants came to the lab, a male experimenter explained that the proposed study was actually a series of three separate studies to explore contemporary young people in various areas, including certain educational programs, products, and dating patterns. The Consent Form was read and signed by all participants before any portion of the study begins. After the participation, they were given a written debriefing that explained the true purpose of the study. All the instructions they received in a lab were predetermined and read by the male experimenter on site.

In the lab, those in Control Group 1 ( $n = 42$ ) were given the educational information about “marketing strategies.” They were explained that the audiotaped message they were about to hear would be provided to young college students to help them become informed consumers of various products in the near future so that the researchers were interested in the clarity and comprehensiveness of the message. To convince the participants and to ensure that participants pay close attention to the audiotaped information, the participants were asked to answer to some questions

regarding the information given in the tape on a questionnaire (Message Rating form; Appendix C-1), even though their responses would not be used in primary analyses. They were given approximately ten minutes to complete the task. Then, the neutral stimuli (slides of various products) were given to the participants. They were told that the researchers are interested in the changes of preferences of certain products among young people across the past decades, therefore given a bogus evaluation questionnaire (Products Rating Scale; Appendix D-1) along with the slides, which asked how attractive the products were and how much they would like to own them. This evaluation questionnaire could also ensure that participants would be paying attention to the contents of the slides. After the slide presentation, the participants were told that the researchers were interested in contemporary males' reference for a dating partner and typical dating pattern and exposed to the slides of average-looking females. They were again given an evaluation questionnaire (Rating Scale of Romantic Relationship; Appendix E). The questionnaire asked how attractive and sexually desirable the females in slides were and how much they would like to date them. At the very end, the participants filled out the demographic questionnaire (Appendix F), which contained the questions to ask about their current partner and the relationship in terms of attractiveness and satisfaction, respectively.

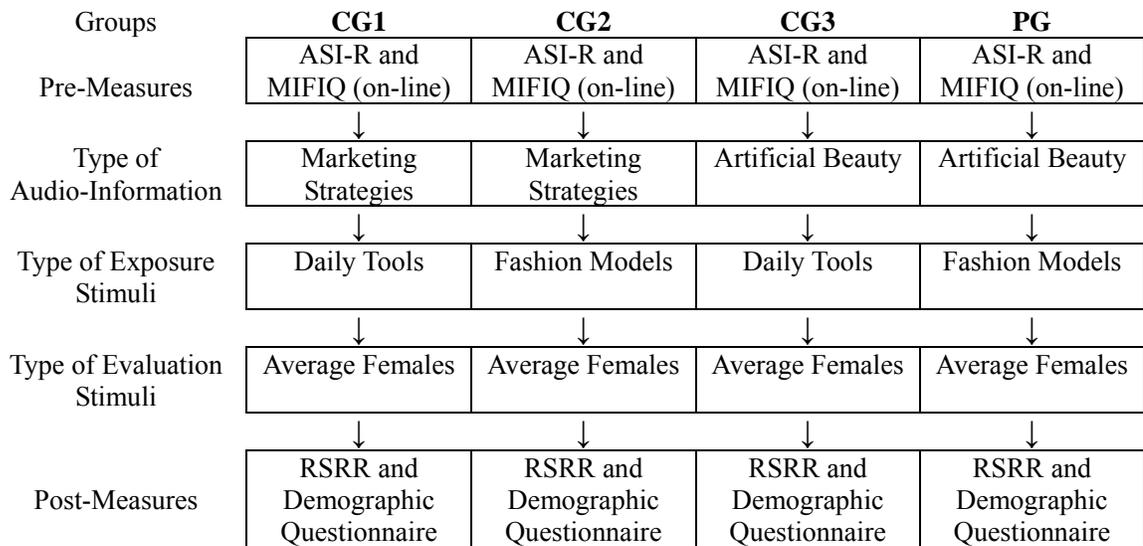
The participants in Control Group 2 ( $n = 38$ ) were given the same control information as those in Control Group 1 with the same rationale and the rating form. However, instead of being given slides of automobiles, they were given slides of attractive fashion models. A similar explanation to the one used in Control Group 1 was provided, that the researchers were interested in the changes of preferences of females'

fashion among young people across the decades. They completed the bogus evaluation questionnaire (Products Rating Scale; Appendix D-2) along with the slides, asking how attractive the models' fashions were and how much they would like their significant other to wear the fashions. After the slide presentation, the participants were presented the slides of average-looking females, with the same explanation as the one used in Control Group 1. They were given an evaluation questionnaire that asked how attractive and sexually desirable the women were and how much they would like to date them. Then, the participants filled out the demographic questionnaire.

Those in Control Group 3 ( $n = 40$ ) were given the psychoeducational information ("artificial beauty") then asked to evaluate the quality of the audiotaped information. They were told that the audiotaped message would be given to educate young college students regarding the female physique in the near future so that the researchers were interested in the clarity of the message. After completing the message rating form (Appendix C-2), they were exposed to the slides of various products and then asked to fill out the products rating scale (Appendix D-1). Then, they were shown the slides of average females and asked to rate the attractiveness and desirability of the females via a questionnaire.

The Psychoeducational Group ( $n = 39$ ) were given the psychoeducational information first, and then asked to answer to questions regarding the audiotaped information with the same rationale as CG3. As they completed the task, they were exposed to the experimental stimuli and a bogus evaluation questionnaire. Then, they were exposed to the slides of average-looking females and given the same rating questionnaire as well as the demographic questionnaire used throughout conditions. See

Figure 1 for the overall procedures of the study.



*Figure 1.* Procedures of All Conditions. ASI-R = the Appearance Schemas

Inventory-Revised, MIFIQ = the Male Internalization of Female Ideal Questionnaire,

RSRR = the Rating Scales of Romantic Relationship.

### *Stimuli and Materials*

Three types of visual stimuli were used. Control stimuli were the slides of various products including a stapler, an office chair, an abacus, and a lawn mower, which were taken from various websites. The attractive female photo set of stimuli consisted of the slides of highly attractive females. These pictures were taken from the websites of model agencies, TV programs, and “picture banks” as mentioned previously. The stimuli consisting of images of average-looking females were from the same sources as the experimental stimuli. Both slides of attractive female images and average-looking female images were pre-rated as either “highly attractive” or “average” by a normative sample demographically similar to the participants in the study. The mean of rated attractiveness of “Attractive” set was 1.88 whereas that of “Average” set was 4.34. The means of estimated age and weight of “Attractive” set were 2.23 and 3.66, respectively, while those of “Average” set were 2.22 and 3.65, respectively.

Two audiotapes were used. One was the extension of “artificial beauty” adapted from the Yamamiya et al. (2005) study, which was used as psychoeducational “inoculation” to prevent the adverse media exposure effects. As described previously, the “artificial beauty” argues that media images are unrealistic and irrelevant standards because their flawless looks are created by professional techniques, such as air-brushing, hair-styling, and make-up. This information was found effective to reduce the media exposure effects among females, though it has never been tested with males. The other information was “marketing strategies” adopted mainly from the personal website of a professor, Dr. Lars Perner (“The psychology of consumers: Consumer behavior and marketing,” 2005), with some minor changes and additions of words to equate the word

length with the psychoeducational information. This information described what types of psychological approaches marketers use to persuade consumers. This information was selected because it might have similar demand characteristics with psychoeducational information in relation to the emphasis and exploitation of psychological persuasion used in the media without the actual psychoeducational ingredients regarding idealized female physique. Both types of the transcripts were equivalent in word length (1033 words for neutral information and 1038 words for psychoeducational information). In addition, the terminology of the transcripts was discussed among a group of graduate researchers and modified to have similar comprehensive levels. A male unknown to the participants recorded the tapes.

### *Measures*

*Demographic questionnaire.* This measure assessed participants' age, ethnicity, height and weight, relationship status, satisfaction level of the relationship as well as their partner's age, ethnicity, and attractiveness. Those who were not in a romantic relationship currently did not answer to the specific questions regarding the relationship and partner.

*The Male Internalization of the Female Ideal Questionnaire (MIFIQ).* This is the scale described previously in Pilot Study 1. It is the modified version of The Sociocultural Attitudes Towards Appearance Scale – 3: Internalization subscale (SATAQ-3: Internalization; Thompson et al., 2004) as mentioned earlier. It is a 5-point Likert-type scale (*1 = Definitely Disagree, 2 = Mostly Disagree, 3 = Neither Agree Nor Disagree, 4 = Mostly Agree, 5 = Definitely Agree*) to tap into the degree to which males internalize sociocultural ideals, compare females to media portrayed sociocultural ideals,

and wish that females in the real world would look like such ideals

*The Appearance Schemas Inventory-Revised* (ASI-R; Cash, Melnyk, & Hrabosky, 2004) is a revision of the Appearance Schemas Inventory by Cash and Labarge (1996). The ASI-R is a 5-point Likert-type scale that taps into core beliefs and assumptions that a respondent has regarding the importance, meaning, and effects of one's appearance in his/her life, as well as the motivational salience of being attractive and managing one's appearance. Respondents rate their agreement level with 20 statements, such as "What I look like is an important part of who I am" and "Before going out, I make sure that I look as good as I possibly can," from the response range of 1 = *Strongly Disagree* to 5 = *Strongly Agree*. The higher the total score, the higher the appearance schematicity. It has an internal consistency of .90 for males. It has moderate to high convergent validities with some body-image scales (e.g., the Situational Inventory to Body-Image Dysphoria; Cash, 2002) and the internalization scales (e.g., the Sociocultural Attitudes Toward Appearance Questionnaire-3: Internalization subscale; Thompson et al., 2004).

*The Message Rating Form* (MRF) was adopted from the scale developed and used in the Sperry, Thompson, and Vandello (2005) study, with a slight modification in words and five additional questions. The measure asks participants to (1) rate the quality of the audiotaped information in terms of believability, effectiveness, comprehensiveness, relevance, convincingness, and influence on a 5-point Likert type scale, and (2) answer to five multiple-choice questions regarding the audiotaped information. This ensured that the participants pay attention to the contents of the messages and understand the information provided in the audiotape. The data of

participants who miss three or more answers will be discarded from the study. However, the scores and/or responses indicated in this form were not used in the primary analyses.

*The Products Rating Scale (PRS)* is a three-item measure to assess the rating of photo stimuli in terms of attractiveness, likeability, and desirability of them on a 7-point Likert type scale, and there are two types of the scale. One is to assess the exposure stimuli of professional fashion models and the other is those of various products. Two of the three items are identical regardless of the type of stimuli (e.g., “Please rate the visual appeal of the model’s fashion [e.g., wardrobe, hairstyle, make-up, accessories]” vs. “Please rate the visual appeal of the product”). However, the last item for the slides of fashion models requires the participants to rate the extent to which they would like the model’s fashion for their significant other whereas the one for the slides of products to rate the extent to which they would like the product for themselves. The participants’ responses on this scale were not used in the primary analysis.

*The Rating Scales of Romantic Relationship (RSRR)* assesses average-looking females in the set of slides in terms of attractiveness and desirability as a romantic partner. It consists of three items regarding physical attractiveness, sexual desirability, and a wish to date the female in a slide. Participants are required to indicate to what extent they agree with the statements by using a 7-point Likert type scale (response range is 1 = *Strongly Agree* to 7 = *Strongly Disagree*). The lower total scores indicate the higher levels of rated attractiveness and desirability, and the total scores of this scale will be used as dependent variable.

## Results

### *Preliminary Analyses*

A one way analysis of variance (ANOVA) was conducted to ensure that all four groups were equivalent on demographic characteristics of the participants, namely, age and BMI. As Table 2-A shows, ages and BMIs of participants were not significantly different from each other ( $F(3,155) = .07, p = .97$ , and  $F(3,155) = .86, p = .46$ , respectively). Moreover, nominal regression analysis was conducted to see if participants' dichotomous demographic characteristics—ethnicity and relationship status—were equivalently distributed across the conditions. According to Table 2-B, the conditions had statistically similar numbers of males of ethnic groups and with relationship status,  $\gamma^2 = 8.83, p = .72$  for ethnicity and  $\gamma^2 = 22.78, p = .09$  for relationship status. Thus, the four conditions had participants comparative in their demographic characteristics.

Table 2-A

*ANOVA Results of Age and BMI Across Conditions*

Variables	<u>CG1 (n = 42)</u>		<u>CG2 (n = 38)</u>		<u>CG3 (n = 40)</u>		<u>PG (n = 39)</u>	
	M	(SD)	M	(SD)	M	(SD)	M	(SD)
Age	19.86	(2.13)	19.79	(2.49)	19.68	(1.38)	19.87	(2.19)
BMI	25.73	(4.50)	24.62	(3.55)	24.32	(4.45)	24.88	(4.19)
							t	F(3,155)
							.97	.07
							.46	.86

Table 2-B

*Nominal Regression Results of Ethnicity and Relationship Status Across Conditions*

Variables	<u>CG1 (n=42)</u>		<u>CG2 (n = 38)</u>		<u>CG3 (n = 40)</u>		<u>PG (n = 39)</u>		p	$\gamma^2$
	n	n	n	n	n	n	n	n		
Ethnicity									.72	8.83
Caucasian	24	25	18	23						
Hispanic/Latino	9	6	8	7						
African-American	6	3	5	4						
Asian	2	3	4	4						
Other	1	1	5	1						
Relationship status									.09	22.78
Not seeing anyone	19	13	21	13						
Dating not exclusively	11	4	7	8						
Dating exclusively	10	20	11	15						
Cohabiting	1	0	0	0						
Engaged	1	0	1	0						
Married	0	1	0	3						

### *Collinearity Diagnostics*

An evaluation of multicollinearity was conducted to determine if the inclusion of the interactions of independent variables (IVs) to test our primary hypotheses would be appropriate. If multicollinearity existed, it would inflate the variances of the parameter estimates (VIF; Variance Inflation Factor). As two of the variables (the types of audio-information and exposure stimuli) were categorical IVs, they were dummy coded with PG as a reference category. The continuous variables were internalization and schematicity. The results of the collinearity diagnostics are summarized in Table 3-A and 3-B.

Table 3-A.

*Collinearity Diagnostics of the Types of Audio-Information, Exposure Stimuli, and Female-Ideal Internalization as Independent**Variables*

Variables	Eigenvalue	Condition Index	Tolerance	Variance Inflation Factor
(Constant)	4.58	1.00		
Female-Ideal Internalization	.92	2.23	.41	2.41
Photo	.43	3.26	.05	20.20
Audio-Information	.05	9.32	.05	19.75
Photo * Female-Ideal Internalization	.01	20.36	.05	21.93
Audio-Information *	.01	25.70	.05	20.70
Female-Ideal Internalization				

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Table 3-B.

*Collinearity Diagnostics of the Types of Audio-Information, Exposure Stimuli, and Appearance Schematicity as Independent Variables*

Variables	Eigenvalue	Condition Index	Tolerance	Variance Inflation Factor
(Constant)	4.56	1.00		
Appearance Schematicity	.96	2.19	.37	2.67
Photo	.43	3.24	.03	32.45
Audio-Information	.04	11.13	.03	32.50
Photo * Appearance Schematicity	.01	26.47	.03	33.34
Audio-Information *	.00	33.72	.03	33.35
Appearance Schematicity				

We examined the values of Tolerance, where  $\text{Tolerance} = 1 - R^2$  and  $R^2$  is the coefficient of determination of the regression of that variable on all other IVs, and Variance Inflation Factor (VIF), where  $\text{VIF} = 1/\text{Tolerance}$ . There are no formal cutoff values of Tolerance or VIF to determine multicollinearity, but the accepted indicators of multicollinearity are an individual VIF greater than 10 and/or Tolerance smaller than .1. According to these widely-accepted indicators, both of the nominal IVs (the types of audio-information and photo exposure stimuli) and their interactions with the moderators (internalization and appearance schematicity) met the criteria of multicollinearity. Therefore, we decided not to include the interactions of the IVs and moderators in the following ANCOVAs. We did enter the moderator as a covariate in these analyses, to ensure that any group differences on these variables would be removed from the main effects and interactions of the photo and audio-information conditions.

#### *Analyses of Covariance (ANCOVAs)*

In order to test the primary hypotheses, a series of  $2 \times 2$  analyses of covariance (ANCOVA) were used with the following factors and levels: information (neutral information and psychoeducational information)  $\times$  exposure stimuli (daily products and attractive females). The two covariates were female-ideal internalization and appearance schematicity. Criterion measures were the RSRR scores and the rating of one's current partner/relationship. The means and standard deviations (SDs) of the criterion measures were summarized in Table 4 and the analysis results are summarized in Table 5-A and 5-B.

Table 4-A

*Means and Standard Deviations of the RSRR Scores Across Groups*

	n	<u>RSRR</u> <u>M (SD)</u>	<u>RSRR Attractiveness</u> <u>M (SD)</u>	<u>RSRR Sexual Desirability</u> <u>M (SD)</u>	<u>RSRR Wish to Date</u> <u>M (SD)</u>
CG1	42	4.30 (.79)	4.07 (.78)	4.25 (.77)	4.59 (.96)
CG2	38	4.77 (.94)	4.63 (1.36)	4.65 (.88)	5.04 (.91)
CG3	40	4.61 (1.14)	4.41 (1.16)	4.53 (1.22)	4.91 (1.16)
PG	39	4.65 (.96)	4.52 (1.03)	4.59 (1.00)	4.85 (.99)

Table 4-B

*Means and Standard Deviations of the Post-Exposure Ratings of Current Relationship Across Groups*

	n	<u>Partner's Attractiveness</u> <u>M (SD)</u>	<u>Partner's Weight</u> <u>M (SD)</u>	<u>Relationship Satisfaction</u> <u>M (SD)</u>
CG	14	11.50 (.65)	3.71 (.83)	1.71 (.91)
CG2	23	1.70 (.76)	3.70 (.97)	1.43 (.51)
CG3	14	1.29 (.47)	3.86 (.66)	1.29 (.47)
PG	21	2.10 (1.67)	3.71 (.72)	1.57 (.98)

Table 5-A

## ANCOVA Results of the RSRR Scores Across Groups with Female-Ideal Internalization Levels and Appearance Schematicity Levels as

## Covariates

Covariates	RSRR		RSRR Attractiveness		RSRR Sexual Desirability		RSRR Wish to Date	
	F(3,155)	p	F(3,155)	p	F(3,155)	p	F(3,155)	p
Female-Ideal Internalization	2.61	.11	2.79	.10	2.79	.10	5.08	<b>.03</b>
Appearance Schematicity	.14	.71	.01	.95	.00	.55	.18	.67
Photo Stimulus	3.38	<b>.07</b>	4.52	<b>.04</b>	2.34	.13	2.11	.15
Audio-Information	.35	.55	.41	.52	.43	.51	.13	.72
Photo * Audio-Information	2.47	.12	2.12	.15	1.29	.26	3.27	<b>.07</b>

Note: Those in bold had p-values less than .1, those in italics had p-values between .1 and .15.

Table 5-B

## ANCOVA Results of the Current Relationship Ratings After an Experiment Across Groups with the Current Relationship Ratings

## Before an

## Experiment, Female-Ideal Internalization Levels, and Appearance Schematicity Levels as Covariates

Covariates	Partner's Attractiveness		Partner's Weight		Relationship Satisfaction	
	F(3,64)	p	F(3,64)	p	F(3,64)	p
(Pre-Ratings of Current Relationship	16.25	.00	27.21	.00	13.65	.00
Female-Ideal Internalization	.89	.35	4.53	<b>.04</b>	.14	.71
Appearance Schematicity	.11	.74	1.52	.22	.08	.79
Photo Stimulus	1.96	.17	2.66	.11	1.10	.75
Audio-Information	1.76	.19	.73	.73	.41	.53
Photo * Audio-Information	2.30	.14	1.04	.31	1.05	.31

Note: Those in bold had p-values less than .1, those in italics had p-values between .1 and .15.

As Table 4-A indicates, there was a marginally significant effect of the photo stimulus for the RSRR total scores,  $F(3,155) = 3.38, p = .07, P\eta^2 = .02$ . That is, males who were exposed to the images of attractive females before evaluating average-looking females were more likely to rate the average females as less appealing in general than those who were exposed to the daily products, regardless of the type of audio-information they were provided with before the exposure stimuli.

Closer examination of the RSRR scores by dividing them to three subscales—Attractiveness, Sexual Desirability, and Wish to Date—yielded a few significant and marginal effects. There was a main effect of photo stimulus on the RSRR Attractiveness subscale,  $F(3,155) = 4.52, p < .05, P\eta^2 = .03$ . That is, those who were exposed to the images of fashion models found average-looking females less physically attractive compared to those who were exposed to the daily products, regardless of the types of audio-information they received at the beginning of an experiment. The mean RSRR Attractiveness scores of those who viewed the photos of fashion models was 4.59 ( $SD = .13$ ) and of those who viewed the photos of daily products was 4.22 ( $SD = .12$ ), with a lower score indicating a better evaluation.

There was also a marginally significant interaction between photo stimulus and audiotape,  $F(3,155) = 3.27, p = .07, P\eta^2 = .02$ , for the RSRR Wish to Date subscale. The order of the RSRR Wish to Date subscale scores across the conditions was as following, and the lower the score, the better the rating: CG1 ( $M = 4.59, SD = .96$ ) < PG ( $M = 4.85, SD = .99$ ) < CG3 ( $M = 4.91, SD = 1.16$ ) < CG2 ( $M = 5.04, SD = .91$ ) (Table 5). This suggests that those who were provided with the neutral audio-information and exposed to the pictures of daily products had the highest interest in

dating the average-looking females, followed by those who were provided with the psychoeducational information and exposed to the pictures of fashion models, those who were provided with the psychoeducational information and exposed to the pictures of daily products, and those who were provided with the neutral audio-information and exposed to the pictures of fashion models. As CG1 and CG2 were provided with the same audio-information (i.e., “marketing strategies”) but exposed to different photo stimuli (i.e., daily products vs. fashion models), the adverse influence of the media exposure on males’ evaluation of average females seemed to be salient.

In terms of the covariates, there was a significant effect for the interest in dating variable,  $F(3,155) = 5.08, p < .05, P\eta^2 = .03$ . That is, the males with higher internalization scores expressed less interest in dating average-looking females.

There were no significant main effects or interactions for the current partner/relationship measures. There was one significant covariate effect for internalization,  $F(3,64) = 4.53, p < .05, P\eta^2 = .07$ , on the rating of a current partner’s perceived weight, indicating that participants with a higher internalization level rated their partner as heavier.

## Discussion

From (heterosexual) males' perspective, attractive females are preferred romantic partners, especially when the level of involvement is still low (Buunk, Dijkstra, Fetchenhauer, & Kenrick, 2002). In addition, most males in a study reported their "ideal" female to be slightly below the national average in their weight (Stake & Lauer, 1987), and males were twice as likely as their female counterparts to refuse to date someone due to her weight (Harris, Walters, & Waschull, 1991). Thus, the appearances of females in our society have been scrutinized and evaluated (Wiederman, 2000), especially in the mate selection process, which often leads to the development of body image disturbance among females, which in turn results frequently in their eating problems and psychological dysfunctioning (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). However, this standard of female attractiveness is not an absolute value; rather, the standard of female attractiveness in our society has been molded by the glorification and recurrent presentation of certain female images via the media. Viewers, including males in general, have cognitively developed the images of ideal females based on the media female images and internalized the images, then compare females in general to such idealized female image and evaluate how close to the ideal the females are. When the females are substantially deviated from the ideal, males may evaluate them as "unattractive" and lose their interest in meeting them.

The direct adverse effect of the media exposure on females in terms of their body image and psychological functioning has been supposed and supported by various

researches. However, this effect may be overshadowed by their daily interactions with others (Cossrow, Jeffery, & McGuire, 2001; Nichter & Nichter, 1991) as their peers and romantic partners may be implicated in their body image disturbance, dieting, and low self-esteem (Murray, Touyz, & Beumont, 1995; Nichter, 2000). In fact, one of the most important causes of body dissatisfaction among females is negative appearance-related feedback, such as teasing (Rieves & Cash, 1996). Romantic partners may be especially crucial referents of social feedback that influence females' self-evaluations (Swann, Rentfrow, & Guinn, 2003), and many males in a study admitted that they have made a weight-related comment to females in the past (Murray et al., 1995). Moreover, a large number of females in the same study stated that males have had effect on their eating habits, exercise, or body image. Thus, weight and appearance-related criticism from romantic partners have particular significance and influence on self-esteem and behaviors of females.

It is reasonable to assume that unrealistic expectations and evaluations of females cultivated by the heavy media portrayal of thin and attractive females result in hurtful teasing and stereotyping about females' weight and appearance (Hargreaves & Tiggemann, 2003). Such weight- and appearance-related negative feedback and attitudes may be more likely from individuals with particular characteristics, such as those with the female-ideal internalization and appearance schematicity, and in particular contexts, such as immediately after the exposure to the media. Nevertheless, this speculation has not been empirically examined much in the past. Therefore, our study tested if males would evaluate average females in less favorable way after being exposed to images of exceptionally attractive females, if particular predispositional characteristics

related to the media exposure influence among females would affect the media exposure effect among males, and if the provision of the media literacy as psychoeducation would reduce the adverse effect of the media exposure on males.

The results of our study partially support our hypotheses. There seems a tendency for males to evaluate average-looking females as less appealing after being exposed to exceptionally attractive media female images. Moreover, an average female stranger is perceived to be less physically attractive immediately after the exposure, compared to when being exposed to the images of inanimate objects. This finding is comparative of that of past studies (e.g., Kenrick & Gutierrez, 1980). Therefore, the media exposure may be a source producing lower ratings of female strangers' physical attractiveness among males.

The types of photo exposure stimuli and audio-information given before the exposure seem to have a marginal interactive influence on males' interest in dating average-looking females. However, a closer examination reveals that a difference lies between the males who are provided with the neutral audio-information and exposed to the images of daily tools and the males who are provided with the same audio-information but exposed to the images of media females, implying that the provision of psychoeducational audio-information before the exposure has no significant effect to reduce the adverse media exposure effect. Thus, we may need to develop a more effective prevention technique, such as the implementation of visual stimuli as the psychoeducational strategy.

As for the predispositional characteristics—internalization and appearance schematicity—appearance schematicity was not found to be significantly influential for

how males evaluate the appearances of females in an experimental photo set or their own current partner. On the other hand, the female-ideal internalization seems to be associated with the evaluation of average females in terms of the interest in dating as well as the perceived weight of the current partner. That is, when males have the high levels of the internalization of sociocultural female-ideal, they tend to express less interest in dating average-looking female strangers compared to those with the low levels of the internalization. In addition, they are more likely to perceive their partner's weight as heavier after the experiment.

### *Limitations*

There are a few limitations to this study that need to be taken into consideration when interpreting the findings. First, we interpret the meaning and effect of the findings of the study based on the fact that males' negative commentary about the appearance of females lead to the development of body image disturbance and low self-esteem among the females. However, we cannot know if the cognitive disapproval of females' appearance leads to actual expression of the disapproval via criticism or teasing. In the future study, if the cognitive evaluation truly results in verbal or behavioral expression of it needs to be examined.

Second, we initially wanted to evaluate the moderating effects of internalization and schematicity. However, multicollinearity was a significant issue, making this analysis inappropriate.

Third, the number of males who were currently in a romantic relationship was relatively small, and thus the analyses of the evaluation of a current partner after the media exposure may not have had an adequate power to detect true significances.

Last, there is a possibility of the restriction of range in the rating of the relationship satisfaction. The mean of the relationship satisfaction before the experiment is 1.55 ( $SD = .66$ ) and after the experiment is 1.50 ( $SD = .75$ ) when the response range is from 1 (Very Satisfied) to 5 (Very Unsatisfied). Even when the satisfaction level increased after the experiment for those in control groups, it would not be reflected on the numeric expression on this scale as their pre-exposure rating was already close to the highest (i.e., smallest) value. Moreover, there was only one item to evaluate the quality of a current romantic relationship.

### *Conclusion*

The appearances of females are constantly compared to the socioculturally accepted standard and evaluated based on the comparison. However, this standard is often unrealistically thin and attractive as it has been founded on the accumulated images of media portrayed females. The appearance evaluation is mostly salient in the mate selection process, especially for males who emphasize the physical attractiveness in mates (Buunk et al., 2002). In fact, much of young adulthood is occupied with (potential) mate selection and evaluation, and romantic involvements dominate social life (Collins & Laursen, 2000). In the mate selection process, however, males often lose interest in females when they do not meet the standard of attractiveness. Even in an already established relationship, romantic partners frequently evaluate and comment on each other's weight and appearance, and reasonably enough males make more negative weight and appearance related commentary, such as teasing, than females. Because compared to females whose romantic partners tell them to gain weight or nothing at all about weight, females whose romantic partners tell them to lose weight are less satisfied

with their relationship regardless of their actual weight (Buunk et al., 2002), and because negative appearance-related commentary has a strong detrimental influence on the development of one's body image, eating behavior, and psychological well-being (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), the mechanism of the negative evaluation of females in general should be disentangled and prevented. However, we still do not know how the cognitive disapproval of the appearances of females is expressed among males after the reference point or standard of female-ideal has been formed by the media, nor do we know if the cognitive disapproval is prerequisite to actual expression of the disapproval via criticism or teasing. The cognitive devaluation and verbal or behavioral expression of it need to be prevented to protect females from suffering body dissatisfaction and low self-esteem. At the same time, this prevention should lead males to have realistic expectations for females in general, thus maintaining adequate interest in females in their environment. Thus, the prevention should be examined further as it may lead to better and healthier intimate life for both males and females in our society.

## References

- Altabe, M., & Thompson, J. K. (1996). Body image: A cognitive self-schema construct? *Cognitive Therapy and Research, 20*, 173-195.
- Berel, S., & Irving, L. M. (1998). Media and disturbed eating: An analysis of media influence and implications for prevention. *Journal of Primary Prevention, 18*, 415-430.
- Berscheid, E., & Walster, E. (1974). Physical attractiveness. In L. Berkowitz (Ed.) *Advances in experimental social psychology* (Vol. 7, pp. 157-215). New York: Academic Press.
- Buunk, B. P., Dijkstra, P., Fetchenhauer, D., & Kenrick, D. T. (2002). Age and gender differences in mate selection criteria for various involvement levels. *Personal Relationships, 9*, 271-278.
- Cash, T. F. (1994). Body image attitudes: Evaluation, investment, and affect. *Perceptual and Motor Skills, 78*, 1168-1170.
- Cash, T. F. (2002). The Situational Inventory of Body-Image Dysphoria: Psychometric evidence and development of a short form. *International Journal of Eating Disorders, 32*, 362-366.
- Cash, T. F., & Labarge, A. S. (1996). Development of the Appearance Schemas Inventory: A new cognitive body-image assessment. *Cognitive Therapy and Research, 20*, 37-50.
- Cash, T. F., Melnyk, S. E., & Hrabosky, J. I. (2004). The assessment of body image investment: An extensive revision of the Appearance Schemas Inventory. *International Journal of Eating Disorders, 35*, 305-316.
- Cattarin, J. A., Thompson, J. K., Thomas, C., & Williams, R. (2000). Body image, mood, and televised images of attractiveness: The role of social comparison. *Journal of Social and Clinical Psychology, 19*, 220-239.

- Cavior, N. (1970). *Physical attractiveness, perceived attitude similarity, and Interpersonal attraction among fifth and eleventh grade boys and girls*. Unpublished doctoral dissertation, University of Houston.
- Collins, W. A., & Laursen, B. (2000). Adolescent relationships: The art of fugue. In C. Hendrick, & S. Hendrick (Eds.), *Close relationships: A sourcebook* (pp. 59-70). Thousand Oaks, CA: Sage.
- Cossrow, N., Jeffery, R. W., & McGuire, M. T. (2001). Understanding weight stigmatization: A focus group study. *Journal of Nutrition Education, 33*, 208-215.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1994). Growing up with television: The cultivation perspective. In J. Bryant & D. Zillmann (Eds.), *Media effects: Advances in theory and research* (pp. 17-42). Hillsdale, NJ: Earlbaum.
- Groesz, L., Levine, M. P., & Murnen, S. K. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders, 31*, 1-16.
- Gross, A. E., & Crofton, C. (1977). What is good is beautiful. *Sociometry, 40*, 85-90.
- Hargreaves, D. A., & Tiggemann, M. (2003). Female “thin ideal” media images and boys’ attitudes toward girls. *Sex Roles, 49*, 539-544.
- Harris, M. B., Walters, L. C., & Waschull, S. (1991). Gender and ethnic differences in obesity-related behaviors and attitudes in a college sample. *Journal of Applied Social Psychology, 21*, 1545-1566.
- Harrison, K., & Cantor, J. (1997). The relationship between media consumption and eating disorders. *Journal of Communication, 47*, 40-67.
- Heintz, R. K. (1950). The effect of remote anchoring points upon the judgments of lifted weights. *Journal of Experimental Psychology, 40*, 584-591.
- Helson, H. (1964). *Adaptation-level theory: An experimental and systematic approach to behavior*. New York: Harper & Row.
- Helson, H., & Kozaki, T. (1968). Effects of duration of series and anchor-stimuli on judgments of perceived size. *American Journal of Psychology, 81*, 292-302.

- Kenrick, D. T., & Gutierrez, S. E. (1980). Contrast effects and judgments of physical attractiveness: When beauty becomes a social problem. *Journal of Personality and Social Psychology*, 38, 131-140.
- Kenrick, D. T., Gutierrez, S. E., & Goldberg, L. L. (1989). Influence of popular erotica on judgments of strangers and mates. *Journal of Experimental Social Psychology*, 25, 159-167.
- Krantz, D. L., & Campbell, D. T. (1961). Separating perceptual and linguistic effects of context effects upon absolute judgment. *Journal of Experimental Psychology*, 62, 35-42.
- Labarge, A. S., Cash, T. F., & Brown, T. A. (1998). Use of a modified Stroop task to examine appearance-schematic information processing in college women. *Cognitive Therapy and Research*, 22, 179-190.
- Levine, M. P., & Smolak, L. (2002). Ecological and activism approaches to the prevention of body image problems. In T. F. Cash & T. Pruzinsky (Eds.), *Body images: A handbook of theory, research, and clinical practice* (pp. 497-508). New York: Guilford Press.
- Levine, M. P., Piran, N., & Stoddard, C. (1999). Mission more probable: Media literacy, activism, and advocacy in the prevention of eating disorders. In N. Piran, M. P. Levine & C. Steiner-Adair (Eds.), *Preventing eating disorders: A handbook of interventions and special challenges* (pp. 3-25). Philadelphia: Brunner/Mazel.
- Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 35, 63-78.
- Markus, H., Hamill, R., & Sentis, K. P. (1987). Thinking fat: Self-schemas for body weight and the processing of weight relevant information. *Journal of Applied Social Psychology*, 17, 50-71.
- Markus, H., & Smith, J. (1981). The influence of self-schemas on the perception of others. In N. Cantor & J. Kihlstrom (Eds.), *Cognition, social interaction, and personality* (pp. 233-262). Hillsdale, New Jersey: Erlbaum.

- Markus, H., Smith, J., & Moreland, R. L. (1985). The role of the self-concept in the perception of others. *Journal of Personality and Social Psychology*, 49, 1494-1512.
- Meiners, M. L., & Sheposh, J. P. (1977). Beauty or brains: Which image for your mate? *Personality and Social Psychology Bulletin*, 3, 262-265.
- Murray, S. H., Touyz, S. W., & Beumont, P. J. (1995). The influence of personal relationships on women's eating behavior and body satisfaction. *Eating Disorders*, 3, 243-252.
- Nichter, M. (2000). *Fat talk: What girls and their parents say about dieting*. Cambridge, MA: Harvard University Press.
- Nichter, M., & Nichter, M. (1991). Hype and weight. *Medical Anthropology*, 13, 249-284.
- Perner, L. (2005). *The psychology of consumers: Consumer behavior and marketing*. [WWW document] URL <http://www.consumerpsychologist.com/>
- Piran, N., Levine, M. P., Irving, L., & EDAP, Inc. (2000, May). *GO GIRLS!™ Preventing negative body image through media literacy*. Paper presented at the Summit 2000 (Children, Youth, and the Media Beyond the Millennium) conference, Toronto.
- Posavac, H. D., Posavac, S. S., & Weigel, R. G. (2001). Reducing the impact of media images on women at risk for body image disturbance: Three targeted interventions. *Journal of Social and Clinical Psychology*, 20, 324-340.
- Rieves, L., & Cash, T. F. (1996). Social developmental factors on women's body-image attitudes. *Journal of Social Behavior and Personality*, 11, 63-78.
- Sherif, M., Taub, D., & Hovland, C. (1958). Assimilation and contrast effects of anchoring stimuli on judgments. *Journal of Experimental Psychology*, 55, 150-156.
- Sperry, S., Thompson, J. K., & Vandello, J. (2005). The influence of communicator weight on psychoeducational message acceptance in females with high and low levels of body image disturbance. *Eating Behaviors*, 6, 247-258.

- Stake, J., & Lauer, M. (1987). The consequences of being overweight: A controlled study of gender differences. *Sex Roles, 17*, 31-47.
- Stice, E. M., Schupak-Neuberg, E., Shaw, H. E., & Stein, R. I. (1994). Relation of media exposure to eating disorder symptomatology: An examination of mediating mechanisms. *Journal of Abnormal Psychology, 103*, 836-840.
- Stormer, S., & Thompson, J. K. (1996). Explanations of body image disturbance: A test of maturational status, negative verbal commentary, social comparison and sociocultural hypothesis. *International Journal of Eating Disorders, 19*, 193-202.
- Swann, W. B., Rentfrow, P. J., & Guinn, J. S. (2003). Self-verification: The search for coherence. In M. R. Leary, & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 367-383). New York: Guilford Press.
- Thompson, J. K., Heinberg, L. J., Altabe, M. N., & Tantleff-Dunn, S. (1999). *Exacting Beauty: Theory, Assessment, and Treatment of Body Image Disturbance*. Washington: American Psychological Association.
- Thompson, J. K., & Smolak, L. (Eds.). (2001). *Body image, eating disorders, and obesity in youth: Assessment, prevention, and treatment*. Washington, DC: American Psychological Association.
- Thompson, J. K., van den Berg, P., Roehrig, M., Guarda, A. S., & Heingerg, L. S. (2004). The Sociocultural Attitudes Towards Appearance Scale – 3 (SATAQ-3): Development and validation. *International Journal of Eating Disorders, 35*, 293-304.
- Tiggemann, M. (2002). Media influences on body image development. In T. F. Cash & T. Pruzinsky (Eds.), *Body images: A handbook of theory, research, and clinical practice* (pp. 91-98). New York: Guilford Press.
- Vitousek, K. B., & Hollon, S. D. (1990). The investigation of schematic content and processing in eating disorders. *Cognitive Therapy and Research, 14*, 191-214.

- Walster, E., Aronson, V., Abrahams, D., & Rottman, L. (1966). Importance of physical attractiveness in dating behavior. *Journal of Personality and Social Psychology, 4*, 508-516.
- Wiederman, M. W. (2000). Women's body image self-consciousness during physical intimacy with a partner. *The Journal of Sex Research, 37*, 60-68.
- Yamamiya, Y., Cash, T. F., Melnyk, S., Posavac, H. D., & Posavac, S. S. (2005). Women's exposure to thin-and-beautiful media images: Body image effects of media-ideal internalization and impact-reduction interventions. *Body Image, 2*, 74-80.

## Appendices

Appendix A: Male Internalization of the Female Ideal Questionnaire

**Please check one:**

Are you currently involved in a romantic relationship (including marriage)?

Yes  No

If you check “Yes,” please do *both SECTION I and SECTION II*. If you check “No,” please do *both SECTION I and SECTION II, but do SECTION II by hypothesizing that you are in a romantic relationship* (i.e., answer what you’d do/feel if you were in a romantic relationship).

**DIRECTIONS:** Please use the scale below to rate your agreement with the following statements.

**SECTION I:**

1. I wish more women looked as athletic as the women in magazines.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

2. I wish more women looked as athletic as sports stars.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

3. I compare most women’s bodies to those of women in “good shape.”

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

4. I compare most women’s bodies to those of women who are athletic.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

5. I would like more women's bodies to look like the women on TV.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

6. I would like more women's bodies to look like the models in magazines.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

7. I would like more women's bodies to look like the women in movies.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

8. More women should try to look like the women on TV.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

9. I compare most women's bodies to the bodies of TV and movie stars.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

10. I compare most women's appearances to the appearances of TV and movie stars.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

11. I do not compare most women's bodies to the bodies of women in magazines.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

12. I compare most women's appearances to the appearances of women in magazines.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

**SECTION II:**

13. I wish my partner/significant other looked as athletic as the women in magazines.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

14. I wish my partner/significant other looked as athletic as sports stars.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

15. I compare my partner's/significant other's body to those of women in "good shape."

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

16. I compare my partner's/significant other's body to those of women who are athletic.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

17. I would like my partner's/significant other's body to look like the women on TV.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

18. I would like my partner's/significant other's body to look like the models in magazines.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

19. I would like my partner's/significant other's body to look like the women in movies.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

20. My partner/significant other should try to look like the women on TV.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

21. I compare my partner's/significant other's body to the bodies of TV and movie stars.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

22. I compare my partner's/significant other's appearance to the appearances of TV and movie stars.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

23. I do not compare my partner's/significant other's body to the bodies of women in magazines.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

24. I compare my partner's/significant other's appearance to the appearances of women in magazines.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
Definitely Disagree	Mostly Disagree	Neither Agree Nor Disagree	Mostly Agree	Definitely Agree

Appendix B: Appearance Schemas Inventory-Revised

The statements below are beliefs that people may or may not have about their physical appearance and the influence of appearance on life. Decide the extent to which you personally **disagree or agree** with each statement and enter a number from 1 to 5. There are no right or wrong answers. Just be truthful about your personal beliefs.

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<b>Strongly Disagree</b>	<b>Mostly Disagree</b>	<b>Neither Agree or Disagree</b>	<b>Mostly Agree</b>	<b>Strongly Agree</b>
_____	1.	I spend little time on my physical appearance.			
_____	2.	When I see good-looking people, I wonder about how my own looks measure up.			
_____	3.	I try to be as physically attractive as I can be.			
_____	4.	I have never paid much attention to what I look like.			
_____	5.	I seldom compare my appearance to that of other people I see.			
_____	6.	I often check my appearance in a mirror just to make sure I look okay.			
_____	7.	When something makes me feel good or bad about my looks, I tend to dwell on it.			
_____	8.	If I like how I look on a given day, it's easy to feel happy about other things.			
_____	9.	If somebody had a negative reaction to what I look like, it wouldn't bother me.			
_____	10.	When it comes to my physical appearance, I have high standards.			
_____	11.	My physical appearance has had little influence on my life.			
_____	12.	Dressing well is not a priority for me.			
_____	13.	When I meet people for the first time, I wonder what they think about how I look.			

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<b>Strongly Disagree</b>	<b>Mostly Disagree</b>	<b>Neither Agree or Disagree</b>	<b>Mostly Agree</b>	<b>Strongly Agree</b>
_____	14.	In my everyday life, lots of things happen that make me think about what I look like.			
_____	15.	If I dislike how I look on a given day, it's hard to feel happy about other things.			
_____	16.	I fantasize about what it would be like to be better looking than I am.			
_____	17.	Before going out, I make sure that I look as good as I possibly can.			
_____	18.	What I look like is an important part of who I am.			
_____	19.	By controlling my appearance, I can control many of the social and emotional events in my life.			
_____	20.	My appearance is responsible for much of what's happened to me in my life.			

Appendix C-1: Message Rating Form (Marketing Strategies)

Please answer the following questions regarding the audiotaped information. (Circle number)

**1) How believable was the audiotaped information?**

<b>1</b> highly unbelievable	<b>2</b> somewhat unbelievable	<b>3</b> undecided	<b>4</b> somewhat believable	<b>5</b> highly believable
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**2) How effective was the audiotaped information?**

<b>1</b> highly ineffective	<b>2</b> somewhat ineffective	<b>3</b> undecided	<b>4</b> somewhat effective	<b>5</b> highly effective
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**3) How easy to understand was the audiotaped information?**

<b>1</b> very difficult	<b>2</b> somewhat difficult	<b>3</b> undecided	<b>4</b> somewhat easy	<b>5</b> very easy
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**4) How relevant was the audiotaped information to you?**

<b>1</b> very irrelevant	<b>2</b> somewhat irrelevant	<b>3</b> undecided	<b>4</b> somewhat relevant	<b>5</b> very relevant
--------------------------------	------------------------------------	-----------------------	----------------------------------	------------------------------

**5) How convincing was the audiotaped information?**

<b>1</b> very unconvincing	<b>2</b> somewhat unconvincing	<b>3</b> undecided	<b>4</b> somewhat convincing	<b>5</b> very convincing
----------------------------------	--------------------------------------	-----------------------	------------------------------------	--------------------------------

**6) How influential was the audiotaped information?**

<b>1</b> very uninfluential	<b>2</b> somewhat uninfluential	<b>3</b> undecided	<b>4</b> somewhat influential	<b>5</b> very influential
-----------------------------------	---------------------------------------	-----------------------	-------------------------------------	---------------------------------

Please answer to the following questions based on what you learned from the audiotape.

1. The primary purpose of companies and organizations when using advertisements is
  - a. to persuade consumers to buy their products and services.
  - b. to educate society regarding the environmental issues.
  - c. to understand human nature.
  - d. to criticize their “enemies.”
  
2. Since a number of different messages compete for potential consumers’ attention, marketers may:
  - a. distribute money to potential consumers to obtain their favors.
  - b. use gory images in advertisements to obtain attention.
  - c. repeat advertisements extensively.
  - d. not even try to advertise.
  
3. Consumers are persuaded by
  - a. logical arguments.
  - b. emotional or symbolic appeals, such as music and colors.
  - c. both of the above
  - d. none of the above
  
4. Snack advertisements are usually scheduled at late in the afternoon because
  - a. that is when the most people are hungry in a day.
  - b. that is when the largest number of people watch television.
  - c. that is when children come back from school.
  - d. that is when the cost of advertising on television is the lowest.
  
5. The take-home message of Dr. Seal is that it is important for us to
  - a. be fully aware of “tricks” marketers are using in order to avoid purchasing unnecessary yet appealing products and become more educated and well-informed consumers.
  - b. boycott the products of the companies that uses “tricks” to persuade innocent consumers.
  - c. tell our friends and family about the “tricks” marketers often use so that they will not be ripped off by such marketers and companies.
  - d. study to become marketers because they make a lot of money.

Appendix C-2: Message Rating Form (Psychoeducational Information)

Please answer the following questions regarding the audiotaped information. (Circle number)

**7) How believable was the audiotaped information?**

<b>1</b> highly unbelievable	<b>2</b> somewhat unbelievable	<b>3</b> undecided	<b>4</b> somewhat believable	<b>5</b> highly believable
------------------------------------	--------------------------------------	-----------------------	------------------------------------	----------------------------------

**8) How effective was the audiotaped information?**

<b>1</b> highly ineffective	<b>2</b> somewhat ineffective	<b>3</b> undecided	<b>4</b> somewhat effective	<b>5</b> highly effective
-----------------------------------	-------------------------------------	-----------------------	-----------------------------------	---------------------------------

**9) How easy to understand was the audiotaped information?**

<b>1</b> very difficult	<b>2</b> somewhat difficult	<b>3</b> undecided	<b>4</b> somewhat easy	<b>5</b> very easy
-------------------------------	-----------------------------------	-----------------------	------------------------------	--------------------------

**10) How relevant was the audiotaped information to you?**

<b>1</b> very irrelevant	<b>2</b> somewhat irrelevant	<b>3</b> undecided	<b>4</b> somewhat relevant	<b>5</b> very relevant
--------------------------------	------------------------------------	-----------------------	----------------------------------	------------------------------

**11) How convincing was the audiotaped information?**

<b>1</b> very unconvincing	<b>2</b> somewhat unconvincing	<b>3</b> undecided	<b>4</b> somewhat convincing	<b>5</b> very convincing
----------------------------------	--------------------------------------	-----------------------	------------------------------------	--------------------------------

**12) How influential was the audiotaped information?**

<b>1</b> very uninfluential	<b>2</b> somewhat uninfluential	<b>3</b> undecided	<b>4</b> somewhat influential	<b>5</b> very influential
-----------------------------------	---------------------------------------	-----------------------	-------------------------------------	---------------------------------

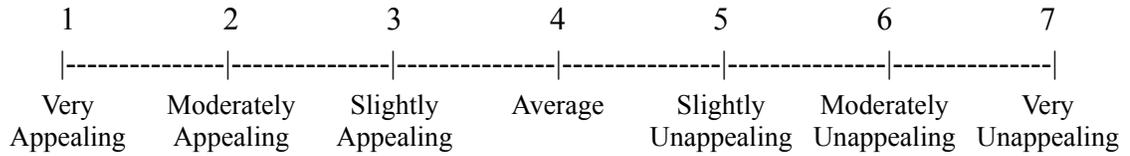
Please answer to the following questions based on what you learned from the audiotape.

1. Professional fashion models appear to be flawless and perfect because
  - a. they really are flawless and perfect.
  - b. they have had plastic surgery to create the perfect looks.
  - c. they are in fact not human beings but mannequins.
  - d. professional make-up artists and hairstylists work on them to create the flawless looks.
  
2. “Air brushing” is a professional technique to
  - a. make the surface of a picture smooth.
  - b. erases any flaws in the models in pictures such as wrinkles, blotches, and even bulges.
  - c. dry a model’s hair.
  - d. create shadow in a picture.
  
3. Which of the following is the technique that swimsuit models use?
  - a. pose slightly to the side with one leg concealing the other since the front of the thigh is flabby
  - b. suck in their stomach really hard to make it look flat
  - c. tape their stomach underneath the swimsuit to stretch and flatten their stomach
  - d. all of the above
  
4. Where can we find women with no “flaw” (e.g., blemish, wrinkle, flabby thigh) in their physical appearance?
  - a. everywhere
  - b. only at exclusive shopping malls
  - c. in college classrooms
  - d. only in the media
  
5. The take-home message of Dr. Seal is that
  - a. media images of attractive women are fake and inappropriate standards for attractiveness, thus we should not be fooled by such images.
  - b. only perfect women can become fashion models.
  - c. all women should try as hard as possible to lose weight to overcome genetic factors that determine their natural body shape.
  - d. we should date fashion models because they are flawless.

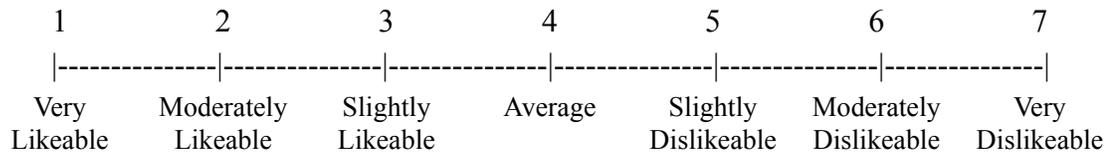
Appendix D-1: Products Rating Scale (Tools/Products)

**Product 1**

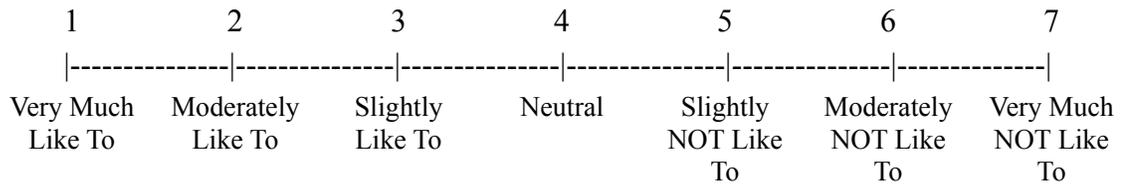
1. Please rate the product's visual appeal using the scale below (please circle one).



2. Please rate the likeability of the product using the scale below (please circle one).



3. Please rate how much you'd like to own the product for yourself using the scale below (please circle one).

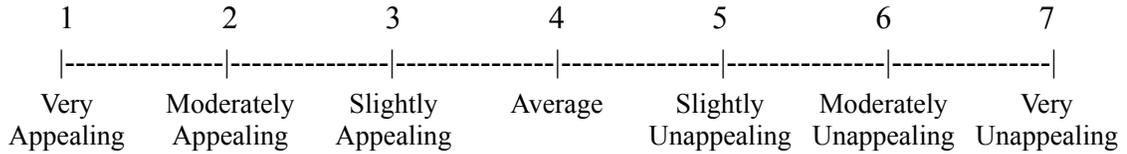


(The items were repeated.)

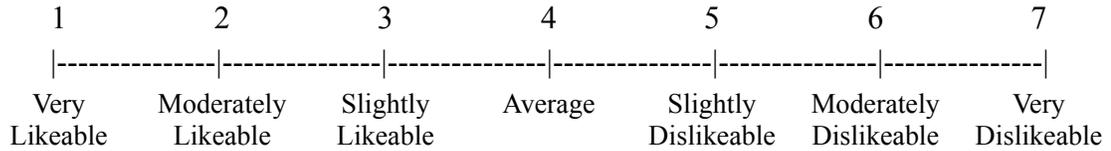
Appendix D-2: Products Rating Scale (Fashion Items)

**Product 1**

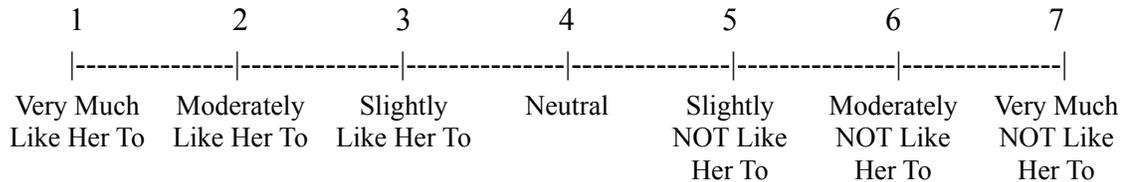
4. Please rate the visual appeal of the model's fashion (e.g., wardrobe, hairstyle, make-up, accessories) using the scale below (please circle one).



5. Please rate the likeability of the model's fashion (e.g., wardrobe, hairstyle, make-up, accessories) using the scale below (please circle one).



6. Please rate how much you'd like your significant other to wear the model's fashion (e.g., wardrobe, hairstyle, make-up, accessories) using the scale below (please circle one).



(The items were repeated.)



Appendix F: Demographic Questionnaire

**PLEASE DO NOT PUT YOUR NAME ON  
ANY OF THE QUESTIONNAIRE MATERIALS**

1. Your Age: \_\_\_\_\_ (years)
2. Your Education (please circle one):  
Freshman      Sophomore      Junior      Senior      Graduate Student
3. Your Race/Ethnicity (please circle one):  
Asian      African-American      Hispanic/Latino      Caucasian      Other
4. Your Height: \_\_\_\_\_ feet and \_\_\_\_\_ inches
5. Your Current Weight: \_\_\_\_\_ pounds
6. Your Sexual Orientation (please check one):  
 Exclusively heterosexual  
 Mostly heterosexual  
 Equally heterosexual and homosexual  
 Mostly homosexual  
 Exclusively homosexual

**RELATIONSHIP HISTORY**

7. Your Current Marital Status (please circle one):  
Never Married      Married      Separated      Divorced      Widowed
8. Please check one that best describes your current “relationship status”:  
 Not dating anyone  
 Dating, but not any one person in particular  
 Dating one person exclusively  
 Cohabiting  
 Engaged  
 Married

**PLEASE GO ON TO THE NEXT PAGE IF YOU ARE IN A RELATIONSHIP**

9. What is the length of your relationship with your partner?

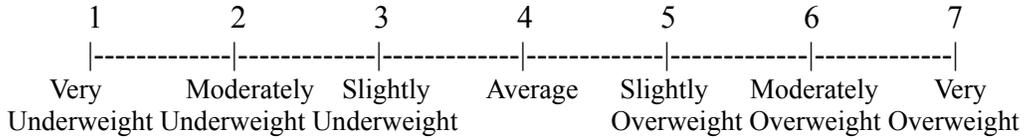
\_\_\_\_\_ years (and) \_\_\_\_\_ months (and) \_\_\_\_\_ weeks

10. Your Partner's Age: \_\_\_\_\_ (years)

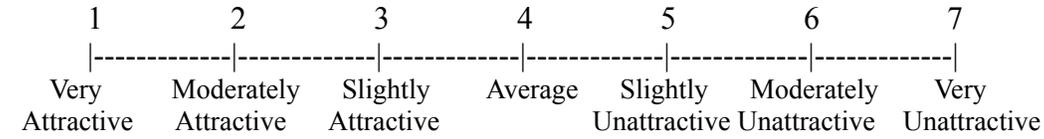
11. Your Partner's Race/Ethnicity (please circle one):

Asian      African-American      Hispanic/Latino      Caucasian      Other

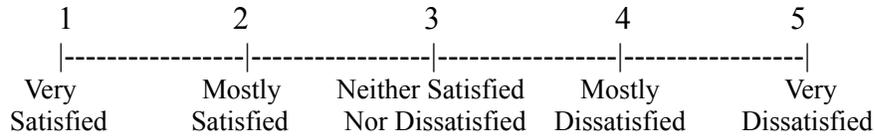
12. Please rate your Partner's appearance by using the scale below (please circle one).



13. Please rate your Partner's appearance by using the scale below (please circle one).



14. How satisfied are you with your relationship with your partner? (Please circle one.)



## Appendix G-1: Transcript for Marketing Strategies Audio-Information

Hello, I am Dr. Rob Seal, a professor and psychologist at Old Dominion University. I have spent most of my professional career conducting research and counseling on the topic of consumer behavior. Consumer behavior refers to the processes that individuals, groups, or organizations use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society. Today I want to talk candidly and give you the facts about the marketing strategies used by those in marketing industry.

First, most marketing firms and organizations improve their marketing strategies by understanding issues such as: one, the psychology of how consumers think, feel, reason, and select from a wide variety of alternatives such as different brands or products; two, the psychology of how the consumer is influenced by his or her environment such as culture, family, friends, signs, and advertisement; and three, limitations in consumer knowledge or information processing abilities that influence decisions and marketing outcome. Understanding these issues helps them adapt their strategies by taking the consumer into consideration. For example, by understanding that a number of different messages compete for their potential customers' attention, they learn that to be effective, advertisements must usually be repeated extensively. They also learn that consumers will sometimes be persuaded more by logical arguments, but at other times, or most of the times, will be persuaded more by emotional or symbolic appeals, such as music and colors. By understanding the consumer, marketers will be able to make a more informed decision as to which strategy to employ for what products.

Second, marketing firms and organizations must take some important facts regarding consumer behavior into consideration when advertising for the public. For instance, consumer behavior occurs either for the individual, or in the context of a group, as in the case where friends influence what kinds of foods a person eats, or even an organization where people on the job make decisions as to which products the firm should use. Moreover, consumer behavior involves the use and disposal of products. Product use is often of great interest to the marketer, because this may influence how a product is best positioned or how we can encourage increased consumption. At the same time, since many environmental problems result from product disposal such as motor oil being sent into sewage systems to save the recycling fee, or garbage piling up at landfills, this is also an area of interest for the marketers. They may want to appeal to consumers by emphasizing how their products and companies are not harmful to the environment.

There are some applications of such consumer behavior. For example, by understanding that consumers are more receptive to food advertising when they are hungry, they learn to schedule snack advertisements late in the afternoon, a few hours before a dinner, like 3 or 4 o'clock, rather than 5 o'clock in the morning. In addition, by understanding that new products are usually initially adopted by a few consumers and only spread later, and then only gradually, to the rest of the population, they learn that companies that introduce new products must be well financed so that they can stay afloat until their products become a commercial success, and it is important to please initial customers, since they will in turn influence many subsequent customers' brand choices.

Now, let's talk about what actually motivates the customer. We considered

some perspectives on behavior as a way to understand consumer motivation, and each of these perspectives suggests different things as to what the marketer should do and what can, and cannot, be controlled.

First, the *Hard Core Behavioral* perspective is based on learning theories such as operant and classical conditioning. These theories suggest that consumers must learn from their own experiences. For example, in order to avoid getting sick from overeating, a consumer must experience the stomach and other ailments resulting from gluttony rather than merely observing *other people* who overeat and get sick. This suggests, then, that it is important to reward good behavior to the extent possible. Hard core behaviorists tend to look at observable behavior such as buying our brand *or* buying another rather than trying to find out what is going on inside the heads of consumers—that is, hard core behaviorists do not like to mess with "mushy" things like attitudes.

Second, the *Social Learning Perspective*, in contrast, allows for *vicarious* learning—that is, learning obtained by watching others getting good or bad consequences for behavior. The *models* that may be observed and imitated include peers and family members as well as relevant others that may be observed in advertising. From our study of social influences, we know that certain people are more likely to be imitated than others especially those that are more similar to ourselves based on relevant factors such as age, social status, or ethnic group. Consider, for example, the poor man who is rejected by women because of his dandruff until he gets "with it" and uses Head 'n' Shoulders shampoo. Other dandruff sufferers are likely to learn from the model's experience. Generally, observations are made of overt behavior, but some room is made for individual reasoning in learning from others. This perspective is clearly more realistic than that of the "Hard Core" view.

Last, the *Rational Expectations* perspective is based on an economic way of looking at the World. Economists *assume* that people think rationally and have perfect information, even though they know very well that these assumptions are often unrealistic. However, despite the unrealistic assumptions made, economists often make relatively accurate predictions of human behavior.

Thus, many people, firms, and organizations use various strategies to convince consumers that their products will improve their health, intellectual capacity, and even the quality of their life as a whole. It is therefore very important for us to be fully aware of such "tricks" they are using in order to avoid purchasing unnecessary yet appealing products and become more educated and well-informed consumers through the understanding of the mechanisms of marketing industry. I hope that the information I have given you today will benefit you in your life, now and in the future.

## Appendix G-2: Transcript for Psychoeducational Audio-Information

Hello, I am Dr. Rob Seal, a professor and psychologist at Old Dominion University. I have spent most of my professional career conducting research and counseling on the topic of body image and female physique. Body image refers to how we feel about our physical appearance. Today I want to talk candidly and give you the facts about the fashion-model images of women that appear everywhere in our media.

As you've surely noticed, these models' skin seems perfect; it's evenly toned and free of blemishes. Models' bodies seem perfect; they do not have fat, bulges, or problem areas. These models seem to have perfect faces to go with their perfect bodies. Women often wonder, "Why can't I look like that?" Most women in our country feel bad about their physical appearance. They either feel they are overweight, or they hate certain parts of their bodies such as their thighs, hips, or faces. In any case, most women in America wish that they were thinner and more physically attractive, just like fashion models.

Let me start by giving you a quick test. In your mind, picture the typical fashion model that you've seen in ads and magazines. When is the last time you saw someone who looked like this on campus, in a class, or walking down the street? Chances are you are drawing a blank because this image of perfected beauty is NOT realistic. Put simply, it's fake. Let me explain what I mean.

Models in magazines like Glamour, Vogue, or Cosmopolitan are worked on by professional make up artists and hairstylists for many hours. Expert make up artists use their skills to create defined cheekbones and exotic eyes and to hide blemishes. Yes, like everybody, models have blemishes, dark circles under their eyes, and unevenly toned skin. Models are often covered in makeup from head to toe. That is the way they get evenly toned skin that is perfectly white or bronze, depending on the color of the make up. Each piece of the model's hair is individually styled by a professional to make it perfect. Sometimes hairstylists use pieces of cardboard attached to the crown of the scalp to force hair to stay in place.

Lighting effects are used to accentuate the model's assets and downplay her flaws. Then, literally hundreds of pictures are taken, but only the best picture is selected to print in a magazine. The selected picture is then air brushed, which is a technique that erases any remaining flaws in the picture such as wrinkles, blotches, and even bulges. The end result is a picture of perfected beauty that no woman really looks like, not even the model who posed for the picture. This explains why you never see someone like this walking down the street. This look of perfected beauty comes after hours of work. In fact, if you were to see this fashion model walking down the street today, you probably would not think that she was a professional model because in real life her body and face are NOT perfect. What IS perfect are the techniques that produce a perfect, but unrealistic, image.

In addition to these deceiving techniques that help create unrealistic images of female beauty, models are usually placed in strategic positions that accentuate their positive characteristics and hide their flaws. For example, when modeling swimsuits, models rarely, if ever, reveal their thighs from the front because the front of the thigh is an area that naturally tends to be flabby. Instead, models will often pose slightly to the side often with one leg concealing the flabby part of the other leg. If you just look

closely, you will see other poses that are planned to hide problem areas.

There are other deceiving techniques to make models' bodies appear perfect. Usually models' stomachs are stretched out because the model is sucking in her stomach very hard and their stomachs are often flattened by taping them underneath the swimsuit. Another technique to prevent bulges is attaching clothespins to the back of models' thighs to pull back excess skin. These are also used in the hips and lower back. These techniques give the appearance that the model has a perfectly toned body, free from problem areas.

So the truth I'm telling you is that these media images of beauty are a lie. The flawless image of women portrayed by the media is NOT real! This image of female beauty does not exist in the real world—it is entirely artificial. A major problem occurs when the media present women with these images of flawless beauty. We are bombarded with unrealistic images of female beauty on television, in magazines, and on highway billboards. These images are everywhere! Is it any wonder most women are dissatisfied with their bodies and desperately wish they could lose some weight?

Another reason that images of female attractiveness in the media are unrealistic is that being as thin and as beautiful as the "made up models" is not possible for the majority of women. The media have selected one particular body type for women—thinness, they and present thin models everywhere, over and over again. In the media, thinness is presented as if it were the norm. Furthermore, women are led to believe that they should strive to be thin. Is it any wonder that our society is currently obsessed with thinness? Women are often left feeling like they need to be thin and have perfectly sculpted facial and body features in order to be attractive.

I urge you to recognize that the images you see in the media are fake, extreme, and unrealistic. Not even the fashion models themselves look so perfect in their real lives. Don't let the media fool you. Everyone has been accepting this message far too long. Can you imagine thin women who are not especially attractive? I'm sure you can. Can you imagine women with normal sized bodies who look terrific? I'll bet you can. Can you imagine that who a woman is as a person is more important than whether she looks like an unreal fashion model?

I hope that the information I have given you today will benefit you in your life, now and in the future.

### About the Author

Yuko Yamamiya received a Bachelor's Degree in Psychology from the University of Hawaii in 1999 and a Master's Degree in Psychology from the Old Dominion University in 2002. She received the Asian-Pacific Scholarship throughout her sophomore, junior, and senior years at the University of Hawaii. She joined Phi Beta Kappa in 1998. She entered the University of South Florida's doctoral program in psychology in the Fall of 2002. Dr. Yamamiya continued her research in the field of body image and its sociocultural factors with Dr. J. Kevin Thompson in the program, and published her works in various scientific journals and presented at some professional conferences. She completed a Degree in Doctor of Philosophy in Experimental Psychopathology in the Spring 2007. Dr. Yamamiya moved back to Japan the same year and has continued her research.